liar species, haunting gardens and often entering houses, where, instead of appearing alarmed, as do most other birds under similar circumstances, it preserves great coolness, hopping gravely from one piece of furniture to another, and carefully exploring the surrounding objects, its short squat figure putting one perpetually in mind of the Nuthatches (*Sittæ*), to which group *Certhiola* must have some strong affinities. It generally keeps in pairs, and appears to breed from March to August, building its domed and often pensile nest, which has a small porch or pent-house roof over the entrance, in almost any kind of situation, but most generally at the extremity of a leafy bough. It sometimes seems to lay its eggs, which rarely appear to exceed three in number, before the nest is finished, rather to the discomfiture of the oologist, who delays inserting his finger into the structure while he sees one or both of the birds busy with a tuft of grass or cotton in their bills, until at last, losing patience, he examines the edifice to find the eggs already hatched. These are in shape elongated, and in colour white, blotched, particularly at the larger end, with rusty red. The nest is generally very untidy on the outside; it is composed of coarse grass or bents, with a good sprinkling of cotton without, and feathers in the inside. The birds are also fond of picking up rags and any sorts of odds and ends they can find about the houses, and adding them to the pile.

"I observed an instance in which two broods were reared from the same nest, with only an interval of ten days between the time the young left it and the laying of an egg."—E. N.

[To be continued.]

VII.—*On the Breeding of the Smew,* Mergus albellus, *L.*

By John Wolley, jun.

The first year I was in Lapland, 1853, it was important for me to find out the native, that is, the Finnish, names for the birds of the country. Of the ducks generally I soon learned to understand to which species each name referred; but there was one called *Ungilo,* concerning which I was for a long time in the

dark. It was described as breeding in holes of trees, or in *tyllas*, that is, nest-boxes. It was a smaller bird than the *Sotka* (Golden Eye), but was able to turn that bird out of its hole, if it wanted it for itself; though some accounts told the reverse story. It had formerly been found not unfrequently on the Muonio River, and especially on the lakes through which the little Jeris-joki runs. On the former river, a little above the inlet of the Palo-joki, there is even an islet called after it, Ungilon-saari, on which, though there are still tyllas, the bird has not been known for a good many years. In the course of time I learned that the bird had a beak like a *Koskilo* (Merganser), and the colours of the male were described to me in a way that left no doubt it was the Smew. Still it required some selection of evidence to hold this opinion firmly; for instance, a woman talking to me imitated the cry of the bird, in doing which she used the syllables "u-u-ungel" with the music of the spring call of the Long-tailed Duck, and by her subsequent description clearly showed that that was the bird she meant, though it is usually known by quite another name, identical with, and perhaps borrowed from, the Swedish, *Alle*. This suggested to me that the name *Ungilo* may have been originally applied to the Long-tailed Duck, inasmuch as we find, in Ström's "Description of Sandmör," that the Long-tailed Duck is called *Angle-mager* (Hook-maker) on parts of the Norwegian coast, doubtless from its cry, connected with the time of its appearance when the sea-fishing begins*.

Nothing is more common than one and the same name being applied to different birds in different districts. Even this very name *Ungilo* is used for the Goosander in certain places on the Upper Torneå River.

Concerning the egg of *Ungilo* I made every inquiry. All the people who remembered it on the Muonio agreed that it was much less than the Golden Eye's, and was liable to be found in

* The Finnish names of things are often nearly related, as the language generally is, to the Lappish. For northern productions it is likely that the Finns, the later comers, would often borrow from the Lapps. The Lapps call the Long-tailed Duck "*Hanghi*," a name probably formed from the ear.

the same hole with eggs of that bird. As a consequence of this popular belief, I often had dwarf eggs of *Sotka* brought to me for *Ungilo's*. From one trustworthy man, Piko Haki, I heard that some ten years before he had found a nest and taken the eggs on sale for eating to a resident trader, who had asked him where he had got Hens' eggs. Now Hens' eggs are unknown in the interior of the country, where I was; but at Uleåborg, where the trader had been familiar with them, they are about the size of our Bantam's eggs. This gave me the best indication I had yet met with of the probable appearance of the egg, and I told my servant-lad Ludwig in confidence that, when we at length should get *Ungilo's* eggs, they would be very like Wigeon's, though probably more white. Of course this was not to be talked of, as it might lead to attempts at imposition. It is possible that the small comparative size of the *Ungilo's* eggs, and the habit of the bird turning out the Golden Eye, had made it little liked by the people, and that they used to catch it on its eggs and kill it, as they do Hawk-Owls and Tengmalm's Owls.

However that may be, year after year passed by, and I never once, out of the tens of thousands of duck-like birds that came under my notice, caught sight of a Smew. In time I came to hear from people who came from the Sodankyla district, a good way to the east of Muonioniska, that *Uinilo*, as it was there called, bred at more than one lake in that neighbourhood. In 1856 I sent a very clever Lap, Martin Pekka, to this quarter for the egg-season, but he could not meet with *Uinilo*.

In 1857 the clergyman of Muonioniska, Priest Liljeblad, had been transferred to Sodankyla; and in the spring of this year, an intelligent young man, Carl Leppajervi, went from Muonioniska to be assistant-schoolmaster with his former teacher. I gave Carl strict charge to make every inquiry for *Uinilo* in that part of the world and of travellers from Kemi Trask. One day (the 30th July 1857), as I passed by the homestead of Regina's Calle, the famous steerer of the Muonio Falls, there was given to me a wooden box, such as is used in the country for carrying butter on a journey, addressed "To the English gentleman Joh Woleg in Muoniovaara." The box was not tied nor secured in

any way; and on the lid being opened, there first appeared a well-written Finnish letter, of parts of which the following is an exact translation:—

"Matthias Lakso of Made-koski-kyla, on the Kitinen-joki, five miles (Swedish) from Sodankyla, has found on the Liesi-joki eggs of Uinilo, and has brought to me three eggs, on which is written a number like this." [Here follows a facsimile of the figure 1 on the eggs. It appears from Hermelin's map, that the Kitinen-joki, of which the Liesi is doubtless a tributary, runs into the Kemi-joki a little north of Sodankyla.] "They were found on the 8th day of the Summer-month (June) 1857. Of an old birch trunk the wood was rotted away, and it was left hollow, forming a hole in which they were." [The expression used involves the idea of the trunk being still standing.] "There were two men in company, and the other man has given four eggs to the priest: there were seven of them; but there was no down brought. * * * * The Uinilo was also killed, and with the eggs it too is sent.—Carl Leppajervi. First day of the Hay-month (July) 1857. And the priest will send the four Uinilo's eggs, if you send him four eggs of *Kuukili*" (*Garrulus infaustus*). "This Uinilo was taken to the priest, and he wants for it 20 copecks."

The next, or probably the first thing in the box that struck my eye, was a stiff-necked skin of a female Smew, with hatching spots on its under side; then I came to five or six much-injured eggs of Greenshank and other birds; and lastly, at the bottom of all, well-wrapped in tow, were the three Smew's, blown each with two holes, which I afterwards found it safe to round off with a drill. The eggs rather staggered me at first sight, they were so like Wigeon's. From time to time I held consultations over them. On comparing them with a series of something like fifty Wigeon's eggs, I found that they were pretty nearly of the same size, though rather below the average. They were flattened at the small end more than any of the Wigeon's, and they had less of the yellowish tinge about them, so that persons not much used to eggs could pick them out of the lot; but all these peculiarities might be accidental, though it seemed remarkable that any woodsman trying to pass off Wigeon's eggs

for Smew's should have been able to find so abnormal a nest. But it was not very long before I satisfied myself that there was a decided difference of texture. This could be perceived on an ordinary examination; but it became very striking on exposing the egg to direct sunshine and examining the penumbra, or space between full light and full shadow, with a magnifying glass—the sharp "*mountainous*" structure of the Wigeon's egg was strongly contrasted with the lower and more rounded character of the elevations in the Smew's. It is my intention to endeavour to illustrate this with the help of photography. Further, I tried the sense of touch: scratching the egg with the most sensitive of my finger-nails I could at once perceive the greater roughness of the Wigeon's. Ludwig, though his hand was by no means of the finest, did not make a single mistake in some ten trials with his eyes shut of various Wigeon's eggs and the supposed Smew's, and one or two other people were equally successful. I now felt no doubt that I had true eggs of the Smew. The ivory-like texture of the Goosander's egg was a pretty parallel to the character of the Smew's.

In the meantime, on August 4th, I sent a letter to Pastor Liljeblad, accompanied by a box with four beautiful eggs of the Siberian Jay, packed as eggs should be packed, and enclosing money, amongst other uses to pay for a thoroughly trustworthy man to travel to Made-koski-kyla, to inquire into the particulars of the capture of the Smew and its eggs, to himself visit the birch trunk, and to bring away the down which would be lying at the bottom of the hole. I also wrote to Carl Leppajervi. In a month after I wrote, I hoped an answer might arrive; but I was disappointed, and I was obliged to leave Muoniovaara for England on the 11th of September. I had not been very long in England when I received a letter enclosing communications from Pastor Liljeblad and from Carl Leppajervi, which had arrived at Muoniovaara on the 16th of September, and also enclosing a specimen of the down, which my agent had picked out of the heap of touch-wood sent with the letters from Sodankyla.

The priest told me in Swedish that he had asked me for the eggs of the Siberian Jay, only because he had for many years pro-

mised a friend in the South to do his best to procure them, and that the only chance left for him was to get them of me—he had been so many times wilfully deceived by the country people; that he now sent me the four *Uinilo's* eggs, which had been brought to him. He added, in answer to a question of mine, "I think that the men who came with them, if not exactly of the best-behaved sort, are at least so far to be trusted that they brought the true ones. Kalle went at once to Made-koski." Kalle's letter said in Finnish, "I have been to Made-koski for the Uinilo's down, but there was not much of it there. The birch stump was open at the top, and who knows but the wind may have carried some of the down away? Matthias Lakso took away a little from what I have sent, to see if he could make out himself that it was Uinilo's. That Uinilo was caught actually from the top of those eggs; indeed it is true. * * * * I saw that in that birch stump there had at some other time been eggs, for there were old pieces of egg-shell. Written 29th of Harvest-month (August) 1857.—Karl Leppajervi."

I was told by my man in Lapland that these four eggs had been blown with only one hole, sufficiently well made, but that a great part of the yolk had been left inside. They were also stained outside; but he had cleaned them out, rounded the holes with a drill, and made a good job of them. The down sent to me I found to agree generally with that on the body of the female Smew; but I did not make a careful examination, and I have not yet made it.

At the end of October 1858 I received these other four eggs. I found that the character which I had previously observed, but which I had originally seen on only one of the first three, was common to all the other four, namely that shown by the presence of a thin calcareous covering outside the egg-shell proper, apparently of the same nature as that which is so conspicuous in the egg of the common tame Swan. Some attempts had been made in Sodankyla, as my man told me, to scrape this off.

The following are the dimensions in two directions, with some description, of four eggs which are now before me, picked out of the six which remain in my possession out of the nest of seven:—

	Greatest length.	Greatest breadth.
1st egg . .	2·04 inches.	1·52 inch.
2nd egg . .	2·05 „	1·47 „
3rd egg . .	2·04 „	1·43 „
4th egg . .	2·04 „	1·42 „

Of the first egg, the widest part is exactly halfway down; but in one direction the inferior fulness of the curve points out which is the small end of the egg; though, were there cut out of the middle of each end a piece of the shell bounded by a circle of a quarter of an inch in radius, I think, as the pieces lay upon a level surface, the piece from the small end of the egg would be found less elevated than the other piece. In other words, the small end of the egg is even more flattened than the large end, though the flattened area there is not so extensive as that of the large end.

Of the second egg, the conjugate diameter is nearer to the large end than it is to the small end, the proportion of the distances being as 9 to 10. The curve towards the small end is less suddenly changed than in the egg last described, though still the present egg is very broad at the small end.

The third egg is equally flat at the small end with the second; but it is rather less curved from the broadest part to the commencement of this flat end.

The fourth is still narrower than the last, before the flatness of the small end commences.

I have previously alluded to the texture and the colour of these eggs.

I have seen a MS. list of birds from the German naturalist Herr Hoffmansegg, then resident in Archangel, from which it appears that *Mergus albellus* occurs in that neighbourhood, which is considerably more southerly than Muonioniska, or Sodankyla. As I did not hear of it on the north or north-east coast of Norway, and as it is not known to breed in Sweden, I should be inclined to suppose it generally an eastern and northern bird.

It is worthy of note, that the very pale colour of the down of the Smew seems to be connected with its choosing holes for

breeding. No bird of the duck kind that has white down, as far as I know, places its eggs in an exposed situation.

The Goosander, Golden Eye, Sheldrake, birds differing much from one another, have all white down, and all lay their eggs in holes of trees when such are to be found, whilst one of them at least has well-coloured eggs.

Beeston, Nottingham,
December 20, 1558.

VIII.—*Recent Discoveries in European Oology.*

By William C. Hewitson.

(Plate II.)

It is with very great pleasure that I find myself again associated with old friends and fellow-labourers in endeavouring to promote a favourite and delightful study.

Birds' eggs, though beautiful objects in themselves, and amongst the first of God's glorious works which gave utterance to that burst of joy which has never forsaken some of us through life, may be made of the greatest use in ornithological study, and would of themselves alone form a foundation towards a general arrangement of birds.

For the eggs of the three species now figured and the notes, which accompany them, I am indebted to the Rev. H. B. Tristram. They have been discovered since the completion of the third edition of the 'Eggs of British Birds,' and that of the *Cursorius* is a most valuable addition to our oological knowledge.

I have adopted those specific names for the three species by which Mr. G. R. Gray has shown that they were first christened. It is quite time that English ornithologists should adopt that golden rule in nomenclature, the right of priority, from which no naturalist should ever deviate.

Cuculus glandarius, Linn. Great Spotted Cuckoo. Eggs, Plate II. figs. 1, 2.

The following most interesting account is from the pen of Mr. Tristram. It does not quite settle the question as to the nesting habits of this bird, and does not exonerate it beyond a